

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

STATE OF CALIFORNIA, et al.,

Plaintiffs,

No. C 06-4333 PJH

v.

**ORDER DENYING CLASS  
CERTIFICATION**

INFINEON TECHNOLOGIES AG,  
et al.,

Defendants.

Plaintiffs' motion for class certification came on for hearing before this court on April 9, 2008. Plaintiffs, certain public entities bringing suit on behalf of government entity classes located within the states of California and New Mexico, appeared through their respective counsel, Charles M. Kagay, Wayne M. Liao, and Emilio Varanini. Defendants appeared through their counsel, G. Charles Nierlich, Kenneth R. O'Rourke, Steven Bergman, David C. Brownstein, Jonathan Swartz, Joshua Stambaugh, and Harrison Frahn. Having read the parties' original papers and the supplemental briefing requested by the court, having carefully considered the parties' arguments and the relevant legal authority, and good cause appearing, the court hereby DENIES plaintiffs' motion for class certification, for the reasons stated at the hearing, and as follows.

**BACKGROUND**

Plaintiffs are comprised of numerous individual States, as well as certain public entities located within those States that are further defined by plaintiffs as "political subdivisions" and "state agencies." Plaintiffs collectively allege a horizontal price-fixing conspiracy in the U.S. market for dynamic random access memory ("DRAM"), carried out

by numerous manufacturer defendants.

A. Background Facts<sup>1</sup>

DRAM is a semiconductor memory chip that is used to store digital information and provide high-speed storage and retrieval of data. It is commonly used in a wide assortment of electronic devices. DRAM comes in different densities, speeds, and frequencies (e.g., 128, 256, or 512 Mb), and is primarily sold in three forms – as free-standing memory chips, as a component in DRAM ‘modules,’ or as a component in other electronic products, such as computers, printers and networking equipment (i.e., “DRAM-containing products”). See Third Amended Complaint (“TAC”), ¶¶ 6-10, 33.

The DRAM manufacturing market is primarily occupied by a handful of leading manufacturers, including the defendants in the instant action during the relevant time period alleged – i.e., from 1998 to June 2002.<sup>2</sup> Defendants’ market share during this time frame exceeded 70%.

Defendants sell the DRAM they manufacture to various customers, including both large scale and small scale customers, through a variety of sales channels. Plaintiffs’ complaint, for example, identifies several major customer groups through which and to whom DRAM is sold:

Original Equipment Manufacturers (“OEMs”). Defendants sell DRAM modules to OEMs (e.g., Dell, HP, IBM, Compaq, Gateway, etc.) directly. The OEMs purchase the majority of this DRAM pursuant to negotiated contracts, which generally provide for bulk

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<sup>1</sup> Many of the background facts relied on by the parties, and summarized herein, are similar or identical to facts previously submitted to the court in briefs filed in the separate but related MDL antitrust litigation that is currently pending before the court, In re Dynamic Random Access Memory Antitrust Litigation, M 02-1486 PJH. See also Class Cert. Motion at 3:17-4:20; Opp. Br. at 5:6-19.

<sup>2</sup> Defendants here include: Micron Technology, Inc.; Micron Semiconductor Products, Inc.; Infineon Technologies AG; Infineon Technologies North America Corp.; Hynix Semiconductor, Inc.; Hynix Semiconductor America, Inc.; Mosel Vitelic, Inc.; Mosel Vitelic Corporation; Nanya Technology Corporation; Nanya Technology Corporation USA; Elpida Memory, Inc.; Elpida Memory (USA), Inc.; and NEC Electronics America, Inc. (collectively “defendants”).

purchases by the OEMs at favorable prices. See TAC, ¶ 85. Sometimes, however, the OEMs purchase DRAM in the “spot” market, where one-time purchases of DRAM (for immediate delivery) are individually negotiated with brokers, distributors, and dealers other than defendants and their authorized distributors.<sup>3</sup> TAC at ¶ 87. After purchasing DRAM directly from defendants (either on the spot market or via contracts), OEMs in turn sell this DRAM to end-users, in one of two forms: as a component in electronic products manufactured by the OEMs (i.e, DRAM-containing products), or as DRAM modules.

Distributors. Defendants also sell DRAM modules directly to wholesale and other distributors. The distributors, many of which are engaged in the sale of various electronic components to customers, then re-sell DRAM modules to OEMs (who in turn sell DRAM to end-users in module form, or in DRAM-containing products), or to end-users.<sup>4</sup> See TAC ¶¶, 83-84.

Module Makers. Defendants sell DRAM chips directly to DRAM memory module-makers. See id. at ¶ 84. These module-makers manufacture DRAM modules using the DRAM chips sold to them directly by defendants. The module-makers then sell the manufactured DRAM modules to OEMs and to wholesale distributors, both of whom in turn re-sell the DRAM modules to end-users (as noted above, OEMs re-sell the DRAM modules in the form of modules or DRAM-containing products, while wholesale distributors re-sell the DRAM modules in module format). Alternatively, module-makers also re-sell the DRAM modules directly to end-users. Id.

End-users. Finally, defendants sell DRAM modules directly to end-user consumers. These end-user consumers may include individuals, businesses, or government/

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<sup>3</sup> OEMs typically resort to the spot market when their needs for DRAM exceed the quantities negotiated or available under the terms of their contracts with defendants, or in the event spot market prices were to fall substantially below contract prices. TAC ¶ 87. Similarly, when OEMs purchase or acquire greater quantities of DRAM through contract purchases than are anticipated or needed for equipment production requirements, OEMs will sell their excess inventories into the spot market. Id.

<sup>4</sup> Presumably, the distributors might also re-sell DRAM modules to other distributors, in addition to OEMs and end-users.

educational entities. See TAC at ¶¶ 34-37.

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In sum, the varying customer groups who purchase DRAM directly from defendants include OEMs, distributors, module makers, and end-users. However, these same customer groups might also purchase DRAM indirectly from defendants, by way of varying intermediate distributors and re-sellers of DRAM belonging to the very same customer categories as those that purchase DRAM directly from defendants.

#### B. Plaintiffs' Third Amended Complaint

Plaintiff States filed their original complaint on July 14, 2006, and a first amended complaint on September 8, 2006. After defendants moved to dismiss in part the first amended complaint, the court granted the motion in part and denied it in part on August 31, 2007. See generally Order Granting in Part and Denying in Part Defendants' Motion to Dismiss ("August 31, 2007 Order"). On September 28, 2007, plaintiff States filed their second amended complaint. They subsequently sought leave, however, to file a third amended complaint, which defendants did not oppose. The court accordingly granted the request and the third amended complaint was filed on November 7, 2007. See generally TAC.

The operative third amended complaint asserts claims by and on behalf of numerous individual States<sup>5</sup> and their government entities, and in various alternative capacities – e.g., proprietary actions, class actions, and/or parens patriae actions alleged by the states' Attorneys General on behalf of varying states' consumers. See generally TAC. The third amended complaint also states claims by both direct and indirect purchasers. Specifically, the complaint alleges three claims for relief: (1) for violation of Section 1 of the Sherman Act; (2) for violation of California's Cartwright Act; and (3) for violation of various state antitrust and consumer protection laws. See TAC, ¶¶ 177-377.

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<sup>5</sup> Since the filing of the instant action, notices of voluntary dismissal have been filed by plaintiff States Ohio, New Hampshire, Texas, Alaska, Delaware, and Vermont.

1 The first claim, brought under the Sherman Act, consists of three separate counts: a  
2 first count alleging injunctive relief by all plaintiff States; a second count alleged by five  
3 plaintiff States as direct purchasers of DRAM, pursuant to certain contractual assignment  
4 clauses; and a third count alleged by 17 plaintiff States whose government entities bought  
5 DRAM directly from defendant Micron. See TAC at ¶¶ 177-194.

6 Plaintiffs' second claim for violation of California's Cartwright Act, also consists of  
7 three separate counts: a first count alleged by the State of California in its proprietary  
8 capacity based on DRAM purchases made at inflated prices during the relevant time  
9 period; a second count alleged as a class action claim brought by the State of California,  
10 the City and County of San Francisco, the County of Santa Clara, and the Los Angeles  
11 Unified School District as class representatives on behalf of all state agencies who  
12 purchased DRAM in California at artificially inflated prices; and a third count alleged by the  
13 State of California acting in a parens patriae capacity, on behalf of natural persons in  
14 California who paid artificially inflated prices for DRAM. See TAC at ¶¶ 195-218.

15 Finally, plaintiffs' third claim for relief asserts multiple counts alleging violations of  
16 more than 40 state antitrust and consumer protection laws. The various counts are alleged  
17 by individual States on their own behalf and on behalf of natural persons, state agencies,  
18 and/or political subdivisions, as well as in a class capacity. See TAC at ¶¶ 219-377.

19 C. The Proposed Classes and Class Representatives

20 As noted, plaintiffs' third amended complaint pleads class claims in addition to the  
21 many other substantive claims alleged. Specifically, two plaintiff States – California and  
22 New Mexico – seek class treatment on behalf of state government entities, in order to  
23 assert claims pursuant to the Sherman Act, and California and New Mexico state antitrust  
24 laws. See, e.g., TAC at ¶¶ 175-76. The government entity class in question is broadly  
25 alleged as follows: “a Class of State Agencies and Political Subdivisions, excluding federal  
26 government entities, in California and New Mexico that purchased DRAM directly or  
27 indirectly from approximately 1998 to December of 2002, to the extent that the entities in  
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said classes are not covered by either the Attorneys General acting in their parens patriae capacities or their proprietary/sovereign capacities and to the extent that a given state law permits such a class.” See id. at ¶ 175. There are also other class representatives. The City and County of San Francisco, the City and County of Santa Clara, and the Los Angeles Unified School District are alleged as additional class representatives for California’s government entity class, and Rio Rancho Public Schools is alleged to be an additional class representative for New Mexico’s class of government entities.<sup>6</sup>

Although plaintiffs’ complaint alleges a single broadly worded class covering both States, plaintiffs – acting through the State of California and the California class representatives, and the State of New Mexico and its class representative – now move for an order certifying (1) a class of government entities within the State of California; and (2) a class of government entities within the State of New Mexico. Plaintiffs’ motion specifically defines the two classes as follows:

- For the State of California: “a class of all public entities within the State of California other than the federal government, including the University of California, the State Bar of California, county governments, municipal governments, public school systems (including elementary school districts, high school districts, and community college districts but excluding charter schools), special district governments independent of the county and city governments, and statutorily-established fair associations.
- For the State of New Mexico: “A class of all public entities within the State of New Mexico other than the federal government, including county governments, municipal governments, public school systems, state-operated colleges and universities, and special district governments.”

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<sup>6</sup> The third amended complaint originally pled the County of Sandoval as the only additional class representative for New Mexico’s government entity class. See TAC at ¶ 176. Defendants moved to strike the County of Sandoval as class representative, however, and the court granted defendants’ request on the record at the April 9 hearing that was held in connection with the instant motion. The court allowed plaintiffs additional time in which to proffer a new class representative, and on April 23, 2008, plaintiffs identified Rio Rancho Public Schools as the substitute representative. On August 13, 2008, the court furthermore granted plaintiffs’ request to submit the Declaration of Randall C. Evans in support of New Mexico’s request for certification of a government entity class. Accordingly, and for purposes of the instant motion and order herein, the court treats Rio Rancho Public Schools as the designated additional class representative for the State of New Mexico’s proposed government entity class.

Defendants oppose certification. Both sides have also filed requests to seal certain corresponding documents, and requests for judicial notice.<sup>7</sup>

### **DISCUSSION**

#### A. Class Certification Standards

In order for a class action to be certified, plaintiffs must prove that they meet the requirements of Federal Rule of Civil Procedure ("FRCP") 23(a) and (b). Under FRCP 23(a), plaintiffs must satisfy four prerequisites. First, the class must be so numerous that joinder of all members individually is "impracticable." See Fed. R. Civ. P. 23(a)(1). Second, there must be questions of law or fact common to the class. Fed. R. Civ. P. 23(a)(2). Third, the claims or defenses of the class representative must be typical of the claims or defenses of the class. Fed. R. Civ. P. 23(a)(3). And fourth, the person representing the class must be able fairly and adequately to protect the interests of all members of the class. Fed. R. Civ. P. 23(a)(4).

In addition to demonstrating these requirements, plaintiffs must also satisfy one of the requirements of FRCP 23(b). In this case, this requires proof that questions of law or fact common to the class predominate over questions affecting the individual members, and on balance, that a class action is superior to other methods available for adjudicating the controversy at issue. See Fed. R. Civ. P. 23(b)(3).

The court does not make a preliminary inquiry into the merits of plaintiffs' claims in determining whether to certify a class. See Eisen v. Carlisle & Jacquelin, 417 U.S. 156

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<sup>7</sup> With respect to the motions to seal, defendants request to file under seal excerpts from the testimony of both Dr. Kenneth Flamm and Ms. Guerin-Calvert, as well as selected portions of their opposition brief. Plaintiffs have also filed a request to seal excerpts of Dr. Flamm's and Ms. Guerin-Calvert's testimony, as well as certain excerpts from the deposition of Dr. Johann Harter. Third party Dell furthermore supports the requests as to certain information provided by Dell. The court hereby DENIES the requests to seal, however, as it finds that an insufficient showing has been made by the parties as to the need for sealing. As for the parties' requests for judicial notice, the court hereby GRANTS them. Defendants seek judicial notice of various orders issued in several out-of-circuit and unrelated cases, and plaintiffs seek judicial notice of certain report excerpts issued by the U.S. Census Bureau. The court finds that both parties have made a sufficient showing pursuant to Federal Rule of Evidence 201.



(1974). It will, however, scrutinize plaintiffs' legal causes of action to determine whether they are suitable for resolution on a class wide basis. See, e.g., Moore v. Hughes Helicopters, Inc. 708 F.2d 475, 478 (9th Cir. 1983). In doing so, the court will accept the substantive allegations contained in plaintiffs' complaints as true, but will consider matters beyond the pleadings in order to ascertain whether the asserted claims or defenses are susceptible of resolution on a class wide basis. See McCarthy v. Kleindienst, 741 F.2d 1406, 1419 n.8 (D.C. Cir. 1984).

While class certification has long been recognized as a valuable mechanism in the enforcement of antitrust laws, a "rigorous analysis" must nonetheless be undertaken by the court to ensure that the requirements of Rule 23(a) and (b) have been satisfied. See Hawaii v. Standard Oil Co., 405 U.S. 251, 262 (1972); Gen. Tel. Co. v. Falcon, 457 U.S. 147, 161 (1982).

B. Certification of California and New Mexico Government Entity Classes

Plaintiffs argue that certification of government classes in California and New Mexico is warranted, because all four elements of Rule 23(a), as well as the predominance and superiority requirements of Rule 23(b), are satisfied. See, e.g., Fed. R. Civ. P. 23(a), (b)(3). In response, defendants do not challenge the assertion that the requirements of Rule 23(a) are met; rather, defendants' challenge raises two specific Rule 23(b)(3) objections: (1) they argue that common questions of law and fact do not predominate over individual questions; and (2) they contend that a class action is not superior to other available methods for the fair and efficient adjudication of this case.

Ultimately, for the reasons explained more fully below, the court agrees with defendants, and concludes that certification of both government entity classes must be denied for failure to satisfy Rule 23(b)(3) requirements.

1. Predominance

The issue of predominance is at the heart of the parties' dispute over certification, and plaintiffs' motion rises or falls on the strength of this factor. As a general rule, Rule



23(b)(3) allows for class certification where “questions of law or fact common to the members of the class predominate over any questions affecting only individual members.” To predominate, common questions “need not be dispositive of the litigation.” See In re Potash Antitrust Litig., 159 F.R.D. 682, 693 (D. Minn. 1995). Rather, courts must identify the issues involved in the case and determine which are subject to “generalized proof” applicable to the class as a whole, and which must be the subject of individualized proof. In antitrust cases, the critical inquiry is whether injury is “an issue common to the class and subject to generalized proof” or is an issue “unique to each class member.” See, e.g., In re Warfarin Sodium Antitrust Litig., 391 F.3d 516, 528 (3d Cir. 2004); Alabama v. Blue Bird Body Co., 573 F.2d 309, 320 (5th Cir. 1978).

Generally speaking, courts often find the predominance element satisfied in horizontal price-fixing cases such as this one. See, e.g., Paper Sys., Inc. v. Mitsubishi Corp., 193 F.R.D. 601, 612 (E.D. Wis. 2000) (price-fixing cases frequently certified); In re Commercial Tissue Prods., 183 F.R.D. 589, 595 (N.D. Fla. 1998) (certification frequently granted in price-fixing cases despite defendant’s arguments that individualized pricing practices defeat commonality). However, this does not hold true when injury or impact can be shown only on an individualized basis. See, e.g., Robinson v. Texas Auto Dealers Ass’n, 387 F.3d 416, 424 (5th Cir. 2004); In re Indust. Diamonds Antitrust Litig., 167 F.R.D. 384 (S.D. N.Y. 1996).

Here, both proposed classes plead violations of the Sherman Act. See TAC at ¶¶ 177-94. Additionally, the California and New Mexico classes plead violations of their respective state antitrust statutes – the Cartwright Act, and New Mexico’s Antitrust Act.<sup>8</sup> See id. at 203-10, 310-12. The critical issues involved in proving violations of all three statutes are the same: plaintiffs must establish (1) the existence of a conspiracy to fix

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<sup>8</sup> Both classes also appear to plead violations of their states’ respective consumer protection statutes. See TAC at ¶¶ 231-33, 313-14. Plaintiffs’ motion, however, analyzes the propriety of class certification vis-a-vis the antitrust claims only. Thus, this court does the same, and the instant analysis is limited to the question of certification in connection with the proposed classes’ antitrust claims only.

prices in violation of the antitrust law in question; (2) the impact – or fact of injury – resulting from defendants’ unlawful activity; and (3) the amount of damages sustained as a result of the antitrust violations. See In re Vitamins Antitrust Litig., 209 F.R.D. 251, 257 (D. D.C. 2002)(setting forth elements of Sherman Act § 1 claim); Cellular Plus, Inc. v. Superior Court, 14 Cal. App. 4th 1224, 1236 (1993)(setting forth elements of Cartwright Act violation); Romero v. Philip Morris Inc., 137 N.M. 229, 232 (N.M App. 2005)(setting forth elements of claim under New Mexico Antitrust Act).

The question, of course, is whether proof of these elements is subject to generalized proof, or whether it is unique to the individual class members, under the facts of this case. While the parties fiercely dispute this issue, the dispute is primarily centered only on the second of the elements – i.e., impact.<sup>9</sup>

Antitrust “impact” is the “fact of damage” that results from a violation of the antitrust laws. See, e.g., In re Bulk [Extruded] Graphite Prod. Antitrust Litig., 2006 WL 891362 at \*10. The damage alleged must show that each individual suffered injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants’ acts unlawful. See id. Proof of impact may be made on a common basis “so long as the common proof adequately demonstrates some damage to each individual” member of the class. See id.; see also Bogosian v. Gulf Oil Corp., 561 F.2d 434, 454 (3d Cir. 1977). In a case involving allegations of price-fixing by a class of direct purchasers, impact may be demonstrated by proving on a generalized basis that defendants caused plaintiffs to pay

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<sup>9</sup> The parties’ more particularized focus on the impact element makes sense, in view of the fact that predominance is frequently satisfied as to the antitrust violation factor in cases alleging price-fixing conspiracies, and the standard for showing predominance as to damages is arguably less than that for impact. See, e.g., In re Bulk [Extruded] Graphite Prod. Antitrust Litig., 2006 WL 891362 at \*9 (whether a conspiracy exists is a common question that predominates over other issues in the case and “has the effect of satisfying the first prerequisite of FRCP 23(b)(3)”; In re Rubber Chem. Antitrust Litig., 232 F.R.D. at 354 (at certification stage of an antitrust class action, plaintiffs have “a limited burden with respect to showing that individual damages issues” do not predominate); In re Potash Antitrust Litig., 159 F.R.D. at 697 (plaintiffs need not supply a “precise damage formula,” but must simply offer a proposed method for determining damages that is not “so insubstantial as to amount to no method at all”).

1 artificially high prices for the price-fixed product in question. However, where, as here, the  
2 proposed class includes indirect purchasers, proof of impact requires a two-fold showing:  
3 first, that defendants caused the prices paid by direct purchasers of DRAM to be artificially  
4 high; and second, that the overcharge paid by the direct purchasers was “passed on” to the  
5 indirect purchasers.

6 As plaintiffs point out, the court has already had occasion to address the former  
7 question in connection with the motion for class certification filed by the direct purchaser  
8 plaintiffs in the related In re DRAM litigation. There, despite customer, pricing, and product  
9 differences, the court held that the methodologies advanced by plaintiffs’ expert allowed for  
10 impact to be demonstrated with recourse to generalized proof. Possibly in view of this prior  
11 holding, the parties now focus their arguments on the second requisite impact element –  
12 i.e., whether it can be shown with evidence common to all class members that the direct  
13 purchasers “passed on” their purported DRAM overcharges to the members of both  
14 proposed government entity classes.

15 As is the norm in complex antitrust cases, the parties have weighed in on both sides  
16 of this question with reference to the testimony of supporting experts, who present  
17 conflicting econometric models in support of their contrasting conclusions. The ultimate  
18 burden is on plaintiffs, however, who must come forward with “seemingly realistic  
19 methodologies” for proving class-wide impact. See In re Indus. Diamonds Antitrust Litig.,  
20 167 F.R.D. at 382-84. The court is mindful that, in doing so, plaintiffs do not need to  
21 establish that they have in hand at this juncture all of the common evidence necessary to  
22 establish class-wide impact. Rather, plaintiffs “need only make a threshold showing” that,  
23 whatever methodology is used, the element of impact will predominantly involve  
24 generalized issues of proof that demonstrate damage to the individual class members,  
25 rather than questions which are particular to each member of the plaintiff class. See, e.g.,  
26 In re Linerboard Antitrust Litig., 305 F.3d 145, 152 (3d Cir.2002)(citing In re Linerboard, 203  
27 F.R.D. 197, 220 (E.D.Pa.2001)); Weisfeld v. Sun Chemical Corp., 210 F.R.D. 136, 143  
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1 (D.N.J.2002).

2 Turning, then, to plaintiffs' proof of impact, plaintiffs submit the testimony of Dr.  
3 Kenneth Flamm. See generally Preliminary Expert Report of Dr. Kenneth Flamm ISO Mot.  
4 for Certification ("Preliminary Flamm Report"); Expert Reply Report of Dr. Kenneth Flamm  
5 ISO Mot. for Certification ("Reply Flamm Report"). Dr. Flamm presents the following  
6 general observations: that DRAM is a commodity product whose price represents, on  
7 average, between 20 to 30 percent of the value of computer equipment into which DRAM is  
8 incorporated; that standard economic models demonstrate that DRAM prices exhibit a  
9 correlation with computer prices, since declines in the price of the former lead to declines in  
10 price of the latter; that standard methodologies (e.g., price indices) can measure price  
11 changes in high technology products such as DRAM and computers, and that in response  
12 to changes in DRAM input prices, computer producers and manufacturers can respond in a  
13 variety of ways affecting the ultimate price of computers – all of which can be measured by  
14 resorting to common statistical methodologies. See Preliminary Flamm Report at 7, 9, 11,  
15 13-14, 16-17.

16 Dr. Flamm also opines that "the state of the economic art is such that pass through  
17 can readily be, and often is, computed for cost changes for products, or components of  
18 products, that are sold through a variety of distribution channels." See id. at 20. Relying  
19 on the "large published literature" that makes use of "precisely the empirical techniques  
20 required to estimate pass through," Dr. Flamm notes that such techniques can be applied in  
21 this case, based upon on detailed price data or price indices for the products affected by  
22 the increase in costs, data on the other factors that likely affect end-user demand and  
23 producer costs, and data on the cost-increasing factor itself (i.e., DRAM prices). Id. at 21.  
24 When the proper empirical techniques are applied to this data in a manner that controls for  
25 individual variables – i.e., via regression models – Dr. Flamm asserts that a "competent  
26 analyst" can isolate the effect of DRAM on final product prices of computers, printers and  
27 networking equipment (e.g., the affected product groupings alleged by plaintiffs in their third  
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1 amended complaint).

2 In applying these general principles to the case at bar, Dr. Flamm continues, there  
3 are at least five econometric methods that can be used for analyzing the actual impact of  
4 the alleged conspiracy on direct purchasers of DRAM – the before and after method, the  
5 benchmark method, the cost-based method, the supply and demand method, and the  
6 reduced form model. Dr. Flamm then notes that the economic literature regarding DRAM  
7 has also already established a pass-through effect of DRAM on ultimate product price. See  
8 Preliminary Flamm Report at 27-28, 32-33. For purposes of addressing this secondary,  
9 and critical, issue whether the direct purchasers “passed through” their overcharges to  
10 plaintiffs, there are three additional approaches that are set forth in published literature and  
11 which are capable of providing an empirical answer – the before and after method of  
12 analysis, which examines the effect of cost increase on producer prices; structural  
13 econometric models of supply and demand; and the reduced form econometric model of  
14 industry prices. See id. at 36-37.

15 Finally, Dr. Flamm also opines at various points in his report upon some of the basic  
16 underlying assumptions he makes in reaching his ultimate conclusion that pass-through  
17 can be readily estimated with resort to common evidence in this case: that at least partial  
18 pass-through of an increase in the cost of DRAM to the price of computer equipment would  
19 be the predicted outcome of a successful price-fixing conspiracy; that in view of the  
20 “interlinked” nature of the spot market, large-user contract market, and authorized  
21 distributors, all users of DRAM-using equipment would have been harmed by a successful  
22 conspiracy to raise prices, whether or not the equipment was using conspirator DRAM; and  
23 that variation across purchasing entities, purchasing methods, and categories of equipment  
24 purchased by class members, can be accounted for in a manner that does not significantly  
25 affect the ability to demonstrate pass-through with common proof. See Preliminary Flamm  
26 Report at 24, 26-28, 46-49.

27 Unsurprisingly, defendants’ expert, Ms. Margaret Guerin-Calvert, strenuously objects  
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1 to Dr. Flamm's analysis. Fundamentally, Ms. Guerin-Calvert contends that the complexity  
2 of the DRAM market, the diverse set of government entities in question, the differing  
3 purchasing mechanisms utilized by the entities to buy DRAM, and the heterogeneity among  
4 ultimate electronic products containing DRAM that were purchased by end-users, makes  
5 common proof of impact impossible. See, e.g., Declaration of Margaret E. Guerin-Calvert  
6 ISO Opp. to Mot. Certification ("Guerin-Calvert Report"), ¶ 10. Ms. Guerin-Calvert notes,  
7 for example, the widely divergent types of customer entities that make up both proposed  
8 government classes. She asserts, for example, that California counties range in size from  
9 about 1200 persons, to over 9.5 million, while the population by county in New Mexico  
10 ranges from less than 1,000 to over 550,000. See id. at ¶ 14. In view of these differing  
11 sizes of county and entities across classes, government entity customers are likely  
12 purchasing different volumes of DRAM pursuant to differing mechanisms, all of which leads  
13 to a different pass-through rate in terms of ultimate DRAM prices paid. Id. at ¶ 20-25. Yet  
14 Dr. Flamm's report does not demonstrate a generalized approach for the pass-through  
15 associated with different volumes of DRAM purchases. Similarly, Ms. Guerin-Calvert notes  
16 that the heterogeneity of the downstream products containing DRAM that was ultimately  
17 purchased by end-users, also precludes a showing of class-wide impact. DRAM is a small  
18 and varying cost among hundreds of other components that influence the supply conditions  
19 of the various final products at issue, and those products – i.e., the specific models and  
20 prices of computers, printers, networking equipment, etc. – will vary in price, depending on  
21 the cost of other inputs, on the distribution channels available at the time of purchase, and  
22 on the competition within and across the product categories themselves. See id. at ¶¶ 29-  
23 43. The same is true, she continues, with respect to the heterogeneity of the varying  
24 procurement channels employed by the various members of the proposed class. Id. at ¶¶  
25 23-28.

26 Ms. Guerin-Calvert also takes aim at other omissions and assumptions made by Dr.  
27 Flamm, including Dr. Flamm's failure to provide any means for identifying and excluding  
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1 those customers for whom no impact at all can be shown. In particular, Ms. Guerin-Calvert  
2 notes that computer manufacturers may have experienced periods of critical supply  
3 shortage of certain components, leading to a supply elasticity of zero; that computer  
4 manufacturers may have depended on forecasts, or long term prices for the purchase of  
5 DRAM, both of which were incorrect predictors of the actual prices of DRAM paid by  
6 purchasers; that transaction costs precluded computer manufacturers from changing their  
7 computer prices in accordance with increasing DRAM overcharges; and that computer  
8 manufacturers may have chosen to simply absorb the DRAM overcharges. Under any of  
9 these scenarios, no impact would have occurred.

10 All of these problems, concludes Ms. Guerin-Calvert, are fatal deficiencies, for they  
11 indicate that individualized issues predominate as far as impact is concerned, thus  
12 precluding a finding that predominance has been satisfied.

13 Resolving the disputes raised by competing economics experts in complex antitrust  
14 cases such as this one is no easy task. The court is mindful, moreover, that in analyzing  
15 the experts' arguments, the court cannot weigh in on the merits of plaintiffs' substantive  
16 arguments, and must avoid definitively resolving disputes that amount to a battle of expert  
17 testimony. See id.; see also In re Diamonds Antitrust Litig., 167 F.R.D. at 384 ("we need  
18 not consider [defendants' expert affidavit] in detail, as it is for the jury to evaluate conflicting  
19 evidence and determine the weight to give the experts' conclusions"). Rather, the court  
20 must leave disputes over the results reached and assumptions made with respect to  
21 competing methodologies to the trier of fact, and discern only whether plaintiffs have  
22 advanced a plausible methodology to demonstrate that antitrust injury can be proven on a  
23 class-wide basis.

24 Nonetheless, the court cannot abandon its duty to conduct a "rigorous analysis" to  
25 ensure that class certification is, in fact, warranted. And here, application of that analysis  
26 compels the court to conclude that plaintiffs' expert has ultimately failed to come forward  
27 with a sufficiently plausible methodology that reassures the court that the evidence that  
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1 plaintiffs intend to present concerning antitrust impact – and specifically, pass-through –  
2 will be sufficiently generalized so as to allow common questions as to impact to  
3 predominate.

4 First, Dr. Flamm's report paints with far too broad a brush stroke. While he sets forth  
5 general overviews of the economic literature related to semiconductor and computer  
6 equipment prices, as well as pass-through in a re-seller context, and further posits that  
7 pass-through for artificially high DRAM prices can be calculated for the DRAM-containing  
8 products purchased by class members based upon common methodologies, the report  
9 hardly goes any further. To be sure, Dr. Flamm explains the methodologies that he could  
10 or would apply to the question of impact. But he does so in general and broad terms,  
11 without providing a sufficiently detailed explanation as to *how* he actually proposes to apply  
12 any particular methodology to specific facts or data *in this case*. Dr. Flamm's illustrative  
13 example of how a reduced form model might be estimated, for instance, is as specific as  
14 Dr. Flamm's report gets. See Preliminary Flamm Report at 44-45, Appendix C. Yet, while  
15 Appendix C contains a good explanation for a hypothetical equation applicable to the  
16 relationship between personal computers, input costs, and price, there is no indication that  
17 the information contained in Appendix C is tethered in any way to concrete data or  
18 information relevant to the actual personal computers purchased by potential members of  
19 the class in this case.

20 Sure enough, Dr. Flamm's own description of his illustrative example notes that the  
21 example "is intended to be suggestive of the general principles that could be used to  
22 estimate pass through," and that the larger and richer data sets that have actually been  
23 produced in this litigation "should permit a much more sophisticated, superior analysis...".  
24 See id. at 44. Thus, it is unclear to the court how it can appropriately determine whether a  
25 common reduced form model can appropriately calculate impact on a generalized basis,  
26 when even the most illustrative example of the model is not particularized to the actual  
27 case at bar. To that end, the court furthermore notes that the illustrative example is limited  
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1 to “personal computer prices.” This lessens the value of the illustration even further, in  
2 view of the fact that both proposed classes seek recovery on behalf of members who  
3 purchased computers, networking equipment, *and* printers, in addition to DRAM. The term  
4 “computers,” moreover, has been even further defined by plaintiffs to mean “desktops,  
5 laptops (or notebooks), servers, workstations and super computers.” See TAC at ¶ 6.  
6 Thus, the most illustrative example offered by Dr. Flamm is not only overly general, it does  
7 not even purport to cover any class members whose purchases are not limited to personal  
8 computers.

9 On this point, this observation brings the court to its second, and even more  
10 fundamental, concern about Dr. Flamm’s analysis. That is the failure to offer specific  
11 methodologies that purport to adequately demonstrate impact for all class members across  
12 customer, product, and procurement type. As defendants’ expert and the above  
13 observations note, the proposed classes include class members who belong to divergent  
14 customer groups, purchase DRAM pursuant to divergent purchasing mechanisms, and  
15 whose DRAM purchases are based on purchases of divergent downstream DRAM-  
16 containing products. Yet Dr. Flamm’s report insufficiently explains how his proposed  
17 methodologies would trace any pass-through to these ultimate class members with  
18 recourse to common proof, notwithstanding these widely divergent factors.

19 To be fair, Dr. Flamm himself appears to recognize the need for any proposed  
20 methodology to take at least some of these divergent factors account. He appears to  
21 acknowledge the need for distinction among at least *six* product classes, when he  
22 professes, for example, “that a relatively small group of six categories of DRAM-using  
23 computer equipment products would be sufficient to undertake an analysis of impact and  
24 measure injury to purchasers of DRAM-using computer equipment.” See Flamm Reply  
25 Report at 40. He goes no further than this, however, saying only that pricing practices  
26 within the same broad product groups as those here “are routinely analyzed in the  
27 economic literature,” and that “further refinement ... *would* be perfectly manageable.” See  
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1 id (emphasis added). This is wholly insufficient, in the court's view, to allay concerns that  
2 individual issues will invariably predominate as to pass-through, in the presence of varied  
3 government entity customers, with admittedly differing procurement methods, who  
4 procured admittedly differing DRAM-containing products.

5 Indeed, in view of Dr. Flamm's total failure to sufficiently take divergent variables into  
6 account (notwithstanding his promise to do so in future), the court sincerely doubts whether  
7 it is even possible for any methodology to do so. It takes no great leap of logic, for  
8 example, to imagine the near impossibility of demonstrating, *with generalized proof*, that  
9 the County of Los Angeles, comprised of over 9.5 million persons, and which purchased a  
10 large volume of computer servers pursuant to a statewide contract, for example,  
11 experienced impact just as a small municipality or agency located in San Francisco,  
12 comprised of a few hundred persons, and which purchased a small number of printers from  
13 a re-seller in San Francisco's "Computer Store" did. In sum, each divergent factor –  
14 customer size, type, procurement channel, product, distribution step – is a factor that  
15 increases the likelihood that proof of pass-through can only be shown with resort to  
16 individualized proof. And without a sufficiently concrete methodology presented by Dr.  
17 Flamm to demonstrate the contrary, the court declines to reach any other conclusion on its  
18 own.

19 In so concluding, the court also notes that, while plaintiffs have duly remarked that  
20 this court previously found predominance existed on the impact question despite customer,  
21 product, and pricing differences in connection with the In re DRAM litigation involving  
22 private direct purchasers, it is not necessarily clear to the court that this previous holding is  
23 controlling here. For not only do the vast differences between government entity  
24 customers, products, and procurement channels involved here far outweigh the differences  
25 in the private direct purchaser action, but the showing made as to impact by the private  
26 direct purchaser plaintiffs' expert – Dr. Roger Noll – was markedly different. As the court  
27 explained in the In re DRAM order granting class certification for the class of direct  
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1 purchasers, Dr. Noll's report was supported by *actual* publication, market, and sales data  
2 produced in that litigation, and was further buttressed by affirmative evidence supporting  
3 plaintiffs' position that the ultimate DRAM pricing paid by all members of the class was  
4 determined with reference to an actual "benchmark" spot price. This type of concrete  
5 showing is precisely what Dr. Flamm has not made here.

6 Finally, even if the above observations were not troubling enough, and as the court  
7 noted at the hearing in connection with the present matter, it finds that there are additional  
8 and obvious conflicts with respect to some of the members of the same proposed  
9 government entity classes. Plaintiffs have acknowledged, for example, that the proposed  
10 classes include both direct purchasers and indirect purchasers. It seems inherent to the  
11 court that certification of a class that includes both types of purchasers – whose proof of  
12 impact will necessarily look different, and whose theories of recovery are widely different –  
13 is improper.

14 \* \* \*

15 In sum, the court finds the proposed government entity classes to be too divergent in  
16 size, in scope (direct v. indirect purchaser), and with too many possibilities for divergent  
17 purchases of DRAM-containing products, to conclude that pass-through may be proven on  
18 a class-wide basis, with reference to common evidence. For too many of the government  
19 entity plaintiffs that purchased DRAM and/or DRAM-containing products will prove impact  
20 only through evidence that will vary according to particular market conditions for a given  
21 procurement channel and product, and thus through evidence that will not be shared in  
22 common with the rest of the proposed classes.

23 The court therefore finds that common questions do not predominate, and the  
24 requirements of Rule 23(b)(3) are not met for either of the two proposed government entity  
25 classes.

26 The court does not doubt that more narrowly tailored sub-classes could be created  
27 that would qualify for class treatment. However, plaintiffs have made no effort whatsoever  
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1 to aid the court in determining what such sub-classes would look like. At the hearing on  
2 this motion, the court instructed plaintiffs to submit further briefing as to sub-classes.  
3 Although they did so, plaintiffs focused their attention only on the use of subclasses for  
4 management purposes, and not on the overall question raised by the court – i.e., whether  
5 the requirements of Rule 23(a) and Rule 23(b)(3) in particular, could be met with the  
6 fashioning of subclasses. Accordingly, without guidance from the plaintiffs, the court  
7 declines to fashion subclasses that would more appropriately pass muster.

8 2. Superiority

9 Even if the court were not to conclude that plaintiffs had failed to establish that  
10 common questions predominate on the critical issue of impact, the court would nonetheless  
11 find that plaintiffs had failed to establish that the class action mechanism is the superior  
12 method in the instant case. See F. R. Civ. P. 23(b)(3) (certification appropriate where “a  
13 class action is superior to other available methods for the fair and efficient adjudication of  
14 the controversy”). Traditionally, there have been four factors that the court looks at in  
15 evaluating the superiority requirement: the individual interests of members of the class; the  
16 extent and nature of any litigation concerning the controversy already commenced by or  
17 against members of the class; the desirability of concentrating the litigation of the claims in  
18 the particular forum; and the difficulties likely to be encountered in the management of a  
19 class action. See id.

20 The first three of these factors generally support a finding that a class action is  
21 superior in this case, with respect to the proposed government entity classes. After all,  
22 without a class action, the number of individual actions that might be necessary would be  
23 impossibly large, particularly in view of plaintiffs’ promise to bring attorney general actions  
24 in the event class treatment were denied, which would further prolong the litigation of the  
25 same claims and issues. Moreover, given the related In re DRAM litigation, and all the  
26 other related litigation before the court, it cannot be denied that class action treatment in  
27 this particular case also makes a certain sense.  
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1 Despite this, however, the court has serious concerns over manageability. Given  
2 the numerous individual issues of fact at issue, and the numbers of class members, all of  
3 whom have divergent interests at stake, prosecution of the action as a class is likely to be  
4 an unmanageable, rather than a superior, method of litigation. Thus, manageability  
5 concerns compel the court to conclude that a class action is not the superior method of  
6 adjudicating this action, at this juncture.

7 C. Conclusion

8 For all the above reasons, the court DENIES class certification, because individual  
9 issues predominate, and prosecuting the instant action as a class action would furthermore  
10 be unmanageable.

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12 **IT IS SO ORDERED.**

13 Dated: September 5, 2008



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15 PHYLLIS J. HAMILTON  
16 United States District Judge  
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